

## SVL Services

### Graphics & Multimedia

- Computer modeling, concept animation
- High resolution graphics for conference presentations
- CD/DVD authoring and duplication

### Video Preparation Facility (VPF)

- Professional quality audio/video development
- Conversion of visualizations in multiple formats
- DVD, VHS, and digital movies

### Scientific Visualization Lab (SVL)

- Multiple SGI Onyx Graphics Consoles (LCD and CRT display)
- VisBox-X1 - projection-based VR system, SXGA+3D stereo display with head and wand-tracking
- High performance Linux GVS and VisBox workstations - data exploration, application development
- High performance Dell workstation - concept VR modeling and movie preparation/presentation
- 50" Plasma (NEC) display with SMART touch-sensitive overlay, digital whiteboard
- Linux workstation with DVD/CD authoring software, scanner, and MSRC network access

NOTE: high performance workstations - dual CPU and dual display

To redirect *SVL Graphics* to your display

**On the display where you want  
SVL graphics:**

**local>xhost SVLSystem.asc.hpc.mil**

\*utilizing ssh, or the kerberized telnet,  
rlogin, or rsh...

**local>telnet SVLSystem.asc.hpc.mil**

**On the SVL system set your  
remote display**

**SVL>setenv DISPLAY your\_display:0.0**

**Note:** PC users may require X-terminal emulation software.

## ASC MSRC Information

### ASC MSRC SVL

#### Hours of Operation

Monday - Friday

6 a.m. - 6 p.m. (ET)

Excluding Federal holidays

Users **MUST** have an ASC MSRC account and a Kerberos SecurID card. For weekend, after hours, and remote access contact the Customer Assistance Center for more information.

Please visit our website

***<http://www.asc.hpc.mil>***

for information about:

- Hardware Resources
  - Software Resources
  - Scientific Visualization
  - Message of the Day
  - Frequently Asked Questions (FAQ)
  - Policies and Procedures
  - *The latest version of this Guide!*
- .....and much more

Customer Assistance Center  
Toll Free: 1-888-677-2272  
Commercial: 937-255-0194  
DSN: 785-0194  
Fax: 937-656-9538  
[msrchelp@asc.hpc.mil](mailto:msrchelp@asc.hpc.mil)  
0606-06  
ASC 04-1653



Aeronautical Systems Center  
Major Shared Resource Center  
(ASC MSRC)



**Quick Reference Guide  
to the  
Scientific Visualization  
Laboratory  
(SVL)**

2435 Fifth Street  
Bldg 676  
Wright-Patterson AFB OH  
45433-7802

## Featured Software

### Graphics Software

SGI OpenGL with GLut  
SGI OpenGL Performer & Inventor Dev. Kit  
VTK, ITK, ICE, ParaView  
CAVE, JAVA2, and MESA Libraries  
GEAR Pro DVD Authoring  
EON Virtual World Toolkit  
Adobe Video Collection

### SVL Software Applications

acad · avs · express · fast · fieldview · fluent · eadsim ·  
emanimate · ensight · framemaker · grads · gridgen · gnuplot ·  
hdf · idl · imtools · maple · mathematica · matlab · matlabMPI ·  
netcdf · paraview · proengineer · pvwave · tecplot · unigraphics  
· vizserver, xanimator, and most HPC application graphical  
user interfaces

NOTE: **man** <application> for more info  
(not all of these applications have **man** pages)

## SVL Peripheral Equipment

### lpsvc1

· *Color LaserJet / Transparencies*

### Epson 1600

· *48 Bit Color Flatbed Scanner*

### Sony DVD

· *DVD+-RW/DVD+-R/CD-RW/CD-R*

For additional software info visit  
<http://www.asc.hpc.mil/software/sciviz.php>

For additional hardware info visit  
<http://www.asc.hpc.mil/hardware/sciviz.php>

## UNIX Commands

enscript	convert text to postscript
ghostview	postscript (pdf) file reader
gr_osview	GUI system monitor
gzcat	expand a compressed file
pdf2ps	converts pdf file to postscript
pwd	print working directory
rmdir	remove empty directory
top	current processes
xhost +[local_disp]	add display access

For additional UNIX information visit  
<http://www.unix.com>

## Printing Commands

lp [-d destination]	default print
lpstat -t	text list of attached printers
printers	GUI list of attached printers
xpp	Linux printer option setup

## Kerberos Commands

klist	display credentials
kinit	request credentials
kdestroy	remove credentials
kpasswd	change secure password
kshell	kerberos shell

For additional Kerberos info:  
<http://www.asc.hpc.mil/customer/userdocs>

## Useful Commands

NOTE: **man** <command> for more info

**archive** - Perform basic file-handling operations on the local archival storage system.

**bzip2** - Compresses files using the Burrows-Wheeler block sorting text compression algorithm, and Huffman coding.

**gzip** - Reduces the size of the named files using LZ77 coding, each file is replaced by one with the extension .gz.

**scp** - Copy files between hosts, scp will ask for passwords if they are needed for authentication.

**safeftp** - Non-interactive FTP wrapper script.

**tar** - Save and restore multiple files in a single file.

## SVL SGI Environment

### Programming

cproto, cvs, bash, expect, m4, make, mpi, perl,  
python, rcs, tcl/tk, tesh

### Browsers/Graphical

gs, gimp, lynx (text only), mozilla\*, firefox

### Text Based

ispell, latex, tex, ndiff

### Editors

ed, red, edit, emacs, ex, nedit, vi, vim, xemacs

### Debuggers

cvd, dbx, ddd, gdb

### Compilers

gcc (C), c++, g++ (C++),  
g77 (FORTRAN 77), f 77, f 90 (FORTRAN 77/90)

\*only on HPC systems

## SVL Environment Variables

\$WRK_DIR	/workspace/username*
\$WRK	/workspace/username
\$HOME	/hafs/username home directory**
\$ARC	/msas/username archive directory**

\*only on HPC systems

\*\*same location as HPC systems

## SciVis Presentation Tips

**Recommended electronic formats for animation/  
video processing:**

Animation: \*.avi uncompressed and Quicktime format.  
A resolution of 720x480 or 640x480 is recommended for  
VHS, CD, or DVD.

**What resolution is best for posters, printing, etc.?**

EPS graphic format for high resolution posters and TIF  
files, *if created in the native software package.*

Graphics for print: 300 dpi.

Screen resolution: 72 dpi.